

BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA  
DOCKET NO. 2003-326-C

IN RE: )  
Analysis of Continued Availability of )  
Unbundled Local Switching for Mass Market )  
Customers Pursuant to the Federal Communication )  
Commission's Triennial Review Order )  
)

**SURREBUTTAL TESTIMONY OF**

**James Webber**

On Behalf of

**MCIMetro Access Transmission Services, LLC and  
MCI WORLDCOM Communications, Inc.**

March 31, 2004

1    **I.       INTRODUCTION**

2

3    **Q.       PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE**  
4       **RECORD.**

5    A.     My name is James D. Webber and my business address is: QSI Consulting, 4515  
6       Barr Creek Lane, Naperville, Illinois 60564.

7

8    **Q.       BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

9    A.     I am employed by QSI Consulting, Inc. as a senior consultant within the firm's  
10     Telecommunication Division.

11

12   **Q.       ARE YOU THE SAME JAMES D. WEBBER WHO FILED DIRECT AND**  
13     **REBUTTAL TESTIMONY IN THESE PROCEEDINGS?**

14   A.     Yes, I am.

15

16   **Q.       ON WHOSE BEHALF WAS THIS TESTIMONY PREPARED?**

17   A.     This testimony was prepared on behalf of MCImetro Access Transmission  
18     Services, LLC and MCI WORLDCOM Communications, Inc. (collectively  
19     “MCI”).

20

21   **Q.       WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

1 A. My purpose is to respond to the Rebuttal Testimony of various BellSouth  
2 witnesses who address issues pertaining to (A) IDLC based loops, (B) EELs, (C)  
3 Automated Distribution Frames, and (D) collocation and transport.  
4

5 **II. IDLC**  
6

7 **Q. MR. AINSWORTH STATES AT PAGE 20 OF HIS REBUTTAL**  
8 **TESTIMONY THAT IDLC BASED LOOPS ARE AVAILABLE TO BE**  
9 **CUT VIA BELL SOUTH'S HOT CUT PROCESSES. DOES THIS**  
10 **STATEMENT ALLEVIATE YOUR CONCERNS WITH RESPECT TO**  
11 **THE AVAILABILITY OF LOOPS SERVED VIA IDLC FACILITIES?**

12 A. No, it does not. While Mr. Ainsworth states that IDLC based loops will be  
13 unbundled, he sidesteps the shortcomings of BellSouth's IDLC unbundling  
14 options, which include prolonged installation intervals, increased costs and lower  
15 quality services. Mass market customers are accustomed to provisioning intervals  
16 that are much shorter than what BellSouth offers to provide with UNE-L under  
17 any of its "hot cut" procedures. To make matters worse, BellSouth's IDLC  
18 unbundling options may require special construction involving delays and the  
19 assessment of additional charges. Further as I will discuss below, many  
20 customers would experience degraded service quality when they are moved off of  
21 IDLC.  
22

1   **Q.     HOW DO UNE-P AND UNE-L INSTALLATION INTERVALS**  
2       **COMPARE?**

3   A.    Even under the most favorable circumstances, BellSouth's loop provisioning  
4       intervals are substantially longer than the intervals CLECs currently experience  
5       with UNE-P migrations. Individual UNE-L migrations, for example, are  
6       completed in approximately 3-5 days, while UNE-P migrations are typically  
7       completed within a single day.

8  
9   **Q.     WILL ALL UNBUNDLED LOOPS BE PROVIDED IN APPROXIMATELY**  
10       **THREE TO FIVE BUSINESS DAYS?**

11 A.    No. While the individual hot cut process may result in some unbundled loops  
12       being provided within the three to five day interval, BellSouth has indicated that  
13       its proposed bulk hot cut processes, for example, will require a minimum  
14       installation period of 21 business days (4 days to negotiate, 3 days to complete a  
15       bulk request containing negotiated due dates, and a 14 day interval until the first  
16       due date is assigned).<sup>1</sup>

17  
18 **Q.     DO ANY OF BELL SOUTH'S IDLC CONVERSION OPTIONS CALL FOR**  
19       **SPECIAL CONSTRUCTION ACTIVITIES AND THE ASSOCIATED**  
20       **CHARGES?**

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<sup>1</sup> Mr. Ainsworth's rebuttal at page 24 indicates that the provisioning interval within this process will be reduced to 8 days at some point in the future.

1 A. Yes. In response to discovery in these proceedings, BellSouth has admitted that  
2 at least two of its conversion options call for special construction and associated  
3 charges.

4

5 **Q. MR. TENNYSON ADDRESSES THE ISSUE OF DEGRADED DIAL-UP**  
6 **SERVICE IN HIS REBUTTAL TESTIMONY. DO YOU HAVE ANY**  
7 **COMMENTS?**

8 A. Yes. First, however, I must note that Mr. Tennyson does not deny that customers  
9 whose services are switched from IDLC based loops to loops provided via its  
10 alternative methods will experience degraded dial-up modem performance.  
11 Rather, his Rebuttal Testimony corroborates my point. In addition, BellSouth  
12 admits in response to MCI's interrogatories that nearly all of its IDLC conversion  
13 options will negatively affect modem performance.

14 At pages 9 to 13 of his Rebuttal Testimony, Mr. Tennyson attempts to  
15 trivialize the impact BellSouth's IDLC conversion options will have on mass  
16 market customers who are moved from UNE-P based services to UNE-L based  
17 service, or from BellSouth's retail services to UNE-L based services. Among his  
18 arguments are the following: (1) the effect on dial-up services is not relevant  
19 because voice grade services are not affected; (2) solving degraded dial-up  
20 performance issues may be difficult; and (3) DS0 services must not necessarily  
21 provide for 64 kbps. Mr. Tennyson's arguments ignore the simple fact that  
22 BellSouth's current IDLC conversion options will, in many cases, negatively  
23 affect CLECs' ability to compete for mass market customers because they would

1 provide CLECs with loops that are inferior to the loops used in BellSouth's retail  
2 operation or by CLECs using UNE-P.

3

4 **Q. TO WHAT EXTENT DO MASS MARKET CUSTOMERS RELY UPON**  
5 **THE AVAILABILITY AND PERFORMANCE OF DIAL UP ACCESS IN**  
6 **ORDER TO REACH THE INTERNET?**

7 A. Approximately one third of South Carolina residential customers utilize dial-up  
8 services in order to access the internet from their homes. Additionally, according  
9 to an August 4, 2003 article appearing on the NetworkWorldFusion website, more  
10 than 60% of home office users access the internet via dial-up services.<sup>2</sup>

11

12 **Q. HOW WERE THE RESIDENTIAL FIGURES YOU MENTIONED**  
13 **CALCULATED?**

14 A. According to a recent article appearing on the CyberAtlas website, 74% of all  
15 residential internet users use dial-up service. The remaining 26% use cable  
16 modems or DSL.<sup>3</sup> According to the U.S. Department of Commerce, National  
17 Telecommunications and Information Administration, approximately 45% of the  
18 residential households in South Carolina have PCs with internet access in their  
19 homes. I multiplied the percentage of residential customers who use dial-up  
20 (74%) services by the percentage of South Carolina households with internet

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<sup>2</sup> <http://www.nwfusion.com/news/2003/0804v92.html>

<sup>3</sup> [http://cyberatlas.internet.com/markets/broadband/article/0,,10099\\_2246061,00.html](http://cyberatlas.internet.com/markets/broadband/article/0,,10099_2246061,00.html)

1 access (45%) in order to arrive at the one-third, or 33.3%, South Carolina specific  
2 figure.<sup>4</sup>

3

4 **Q. IS IT YOUR POSITION THAT ILECs ARE REQUIRED TO**  
5 **GUARANTEE MODEM PERFORMANCE?**

6 A. No. But Part 51.319(a)(2)(iii) of the FCC's rules does state that ILECs are  
7 required to "provide nondiscriminatory access, on an unbundled basis, to an entire  
8 hybrid loop capable of voice-grade service (i.e. equivalent to DS0 capacity)" in  
9 cases where alternative copper facilities are not provided. It is unclear whether  
10 anything less than DS0 capacity is consistent with the FCC's rules.

11

12 **Q. WHAT IS A DS0 AND WHAT IS ITS CAPACITY?**

13 A. Newton's Telecom Dictionary (19<sup>th</sup> edition) defines DS0 as follows:

14 Digital Signal, Level Zero. DS0 is 64Kbps. As the basic building block of  
15 the DS hierarchy, it is equal to one voice conversation digitized under  
16 PCM. Twenty-four DS-0s (24x64Kbps) equal one DS-1, which is a T-1,  
17 or 1.544 Mbps.

18

19 The Voice and Data Communications Handbook (4<sup>th</sup> Edition) describes DS0 as:

20 Eight thousand samples per second, with each sample requiring eight bits,  
21 generates a digital stream of data at a rate of 64,000 bits per second. We  
22 know this as the *digital signal 0* (DS0), the digitized equivalent of one  
23 voice channel. (See Bates, Regis J. "Bud" and Gregory, Donald W.  
24 (2001), 4th Edition, McGraw-Hill at p.85).

25

26

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<sup>4</sup> <http://www.ntia.doc.gov/ntiahome/dn/hhs/TableH1.htm>

1   **Q.    WHAT WOULD BE THE EFFECT OF BELLSOUTH'S IDLC**  
2           **UNBUNDLING ALTERNATIVES ON THE QUALITY OF THE LOOP**  
3           **AVAILABLE TO CLECs?**

4    A.    When a V.90 modem is connected to a telecommunications path capable of  
5           supporting 64 kbps, data throughput at the end user's computer would be *limited*  
6           to about 53 kbps due power and signaling constraints. Observable data  
7           throughput rates are more likely to be in the range of 50 kbps. The issue  
8           addressed in my Direct Testimony pertains to BellSouth's IDLC unbundling  
9           options that involve additional Analog to Digital (A/D) conversions. These  
10          additional A/D conversions render the V.90 protocol completely unobtainable.  
11          Once an end user's service is moved off an IDLC based loop and placed onto one  
12          of these lesser capable loops, modems, which could otherwise benefit from the  
13          V.90 protocol, will fall back to the V.34 protocol, which has a maximum  
14          throughput of 33.4 kbps. I do not believe the V.34 protocol provides end users  
15          with service that is equivalent to the V.90 protocol.

16

17   **Q.    IS IT YOUR UNDERSTANDING THAT BELLSOUTH HAS TESTED**  
18           **IDLC UNBUNDLING TECHNIQUES?**

19   A.    Yes. Specifically, Mr. Tennyson's Rebuttal Testimony states that BellSouth has  
20          tested the performance and feasibility of the "hairpin," or "side door," IDLC  
21          unbundling technique described in my rebuttal. Based on one trial that examined  
22          two loops provided under this technique, BellSouth has concluded that the  
23          "hairpin," or "side door," technique is ineffective. Moreover, BellSouth appears



1           unwilling to explore other options which would provide for the re-use of IDLC  
2           based facilities.

3

4   **Q.     UNDER WHAT CIRCUMSTANCES IS THIS TECHNIQUE**  
5   **APPLICABLE?**

6   A.     This form of IDLC unbundling may come into play in any circumstances where  
7           IDLC is deployed. The other form of IDLC unbundling described in my Direct  
8           Testimony was the use of interface groups, which would come into play where  
9           GR-303 compliant IDLCs are deployed.

10

11   **Q.     BASED ON MR. TENNYSON’S DESCRIPTION OF THE TEST**  
12   **BELLSOUTH CONDUCTED REGARDING THE VIABILITY OF THIS**  
13   **IDLC UNBUNDLING TECHNIQUE, SHOULD FURTHER TESTING BE**  
14   **FORECLOSED?**

15   A.     No. A significant portion of BellSouth’s customer base and the CLECs’ UNE-P  
16           customer base is served via IDLC based loops. It is evident from what has been  
17           discussed in this proceeding that “spare” copper facilities will not be available to  
18           support a competitive marketplace if that marketplace had to rely on UNE-L. In  
19           order to remove impairment, the ILECs must provide a workable solution that  
20           allows end-users to maintain a comparable level of service when they switch to  
21           UNE-L based facilities. Hence, the implementation of a solution that allows for  
22           the re-use of IDLC facilities that does not degrade service is critical.

23

1 **Q. WHAT DO YOU SUGGEST?**

2 A. BellSouth's test was performed on only two lines that were working in "Mode II"  
3 (*i.e.*, with concentration). A test on IDLC based lines operating without  
4 concentration is warranted. Testing another vendor's IDLC equipment also may  
5 be worth considering. Additionally, testing IDLC equipment terminating on  
6 switches other than the Nortel DMS 100 may yield different results for BellSouth  
7 and should be explored. Indeed, the FCC's *TRO* stated that other ILECs have  
8 successfully provided digital access to unbundled loops over IDLC based  
9 facilities using the hairpin technique. To the extent that IDLC based end-user  
10 loops will be unbundled on a going-forward basis in order that CLECs can serve  
11 the mass market, all reasonable alternatives should be explored.

12  
13 **Q. AT PAGES 8 AND 9 OF HIS REBUTTAL TESTIMONY, MR. TENNYSON**  
14 **STATES THAT UNBUNDLING NEXT GENERATION DIGITAL LOOP**  
15 **CARRIERS BY EMPLOYING GR-303 INTERFACE GROUPS IS**  
16 **IMPRACTICAL. PLEASE COMMENT.**

17 A. My Direct Testimony described the use of GR-303 interface groups consistent  
18 with Telcordia's *Notes on the Network*. I am not aware of anything that  
19 demonstrates this unbundling technique is not feasible and I believe it should be  
20 considered as a potential solution to address IDLC unbundling related issues. It  
21 appears BellSouth's primary objections to the use of this technique are that GR-  
22 303 compliant IDLC comprise a relatively small percentage of BellSouth's  
23 network and that CLECs would be required to accept a DS1 hand-off. Thousands

1 of customers receive services over such facilities and may be affected if their  
2 loops are moved from BellSouth retail services to UNE-L or from UNE-P to  
3 UNE-L. From MCI's perspective, a DS1 hand-off is preferable particularly when  
4 considering the alternative – degraded end-user services.

5  
6 **Q. PLEASE SUMMARIZE YOUR POSITION WITH RESPECT TO IDLC**  
7 **BASED LOOPS.**

8 A. Based on BellSouth's provisioning intervals and its IDLC conversion methods, it  
9 is clear that if CLECs are restricted to UNE-L, their ability to provide services to  
10 customers who are served via IDLC based loops will be diminished when  
11 compared to their abilities when they are able to utilize ULS to access end-users.  
12 Provisioning delays and degraded service quality would hamper CLECs' ability to  
13 compete for mass market customers if not corrected.

14  
15 **III. DS0 EELS AND HOT CUTS TO EELS**

16  
17 **Q. MR. VARNER IMPLIES THAT DS0 EELS ARE CURRENTLY A VIABLE**  
18 **SOLUTION TO ADDRESS THE MASS MARKET. DO YOU HAVE ANY**  
19 **COMMENT?**

20 A. Mr. Varner's testimony notes that the majority of the EELs BellSouth has  
21 provided in South Carolina are comprised of *DS1 loops* and then states that the  
22 company has some unspecified experience with DS0 based services, without  
23 providing any real data. While Mr. Varner implies that DS0 EELs are, or will be,

1 available in a manner that allows CLECs to support mass market customers, his  
2 statement does not provide the information CLECs need to actually begin to  
3 utilize this method for providing service to their customers. Indeed, the facts  
4 demonstrate that DS0 EELs are not currently provided to CLECs in any  
5 significant volume and it is entirely unclear if, or when, CLECs will be able to  
6 utilize EELs in order to support the mass market. By BellSouth's own admission  
7 there are only 7 EELs comprised of DS0 loops in its South Carolina territory  
8 today.

9  
10 **Q. PLEASE DISCUSS THE EXTENT TO WHICH BELL SOUTH'S HOT CUT**  
11 **PROCESSES CAN BE USED WITH EELS TO CONVERT UNE-P LINES**  
12 **TO UNE-L.**

13 A. At page 12 of his Rebuttal Testimony, Mr. Ainsworth confirms that BellSouth's  
14 batch hot cut process does not include cuts to EELs, stating that "BellSouth has  
15 agreed to include hot cuts to DS0 EELs in its batch and individual hot cut  
16 processes," with a target implementation date of July 2004. Based upon his  
17 testimony here in South Carolina and other BellSouth states, however, CLECs  
18 know very little about the process that BellSouth is developing, when the process  
19 will actually be implemented, whether it will be fully mechanized, and the extent  
20 to which the process will be timely, seamless, and cost effective. It would appear  
21 that process will require substantial manual intervention whereas the UNE-P  
22 migration process is mechanized. It also appears that the process will require that  
23 multiple orders be placed to provision a single customer onto a DS0 EEL facility

1 and that more information may be required to place such an order than would be  
2 required to place an order for UNE-P based services. Clearly, more detailed  
3 information should be provided in this regard.

4 At this point, however, and until the process to which Mr. Ainsworth  
5 alludes is implemented and tested, CLECs cannot fully ascertain the extent to  
6 which they will be able to utilize EELs to support the mass market. Early  
7 indications are that the processes will not be timely, seamless or cost effective.

8

9 **IV. AUTOMATED DISTRIBUTION FRAMES**

10

11 **Q. MR. TENNYSON ADDRESSES ISSUES PERTAINING TO AUTOMATED**  
12 **DISTRIBUTION FRAMES (ADF) IN HIS REBUTTAL TESTIMONY. DO**  
13 **YOU HAVE ANY COMMENTS?**

14 A. My understanding is that Mr. Tennyson has concluded ADF technologies are not  
15 currently feasible either due to size or economic constraints. MCI has not  
16 recommended any one particular technology be implemented as a pre-condition to  
17 a finding of “no impairment.” However, I understand that ADFs are being  
18 integrated into other carriers’ networks including, for example, Verizon’s network  
19 in New York and that those carriers intend to use those automated distribution  
20 frames to provide Hot Cuts. Such a deployment strategy may well be fruitful  
21 here.<sup>5</sup> Attached to this testimony as Exhibit JDW 5 is a whitepaper from NHC, an  
22 ADF technology vendor, describing the technology and its applications.

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<sup>5</sup> Before the State of New York, Public Service Commission, *Proceeding on Motion of the Commission to Examine the Process, and Related Costs of Performing Loop Migrations on a More Streamlined (e.g.,*

1                   Based on these facts, it would seem unreasonable to completely dismiss  
2                   the possibility that ADF technology can, or should, be used in the future to  
3                   perform hot cuts on an automated basis.  
4

5       **V.       COLLOCATION AND TRANSPORT**  
6

7       **Q.       MR. GRAY’S REBUTTAL TESTIMONY DENIES THE POSSIBILITY**  
8                   **THAT ACCESS TO COLLOCATION SPACE AND FACILITIES COULD**  
9                   **GIVE RISE TO IMPAIRMENT. DO YOU HAVE ANY COMMENTS?**

10      A.       Yes. Mr. Gray argues that BellSouth’s has achieved outstanding performance in  
11               meeting the collocation requirements of the South Carolina Public Service  
12               Commission and that should the company fail to meet the Commission’s  
13               performance standards, it would be subject to penalties under the SEEMs Plan.  
14               Whether performance has been “outstanding” may or may not be true for the  
15               current competitive environment. However, Mr. Gray’s argument is not germane  
16               because if all impediments to UNE-L competition were removed and all CLEC  
17               demand for loops had to be supported through collocation and EELs, demand for  
18               collocation could increase dramatically. Based upon the number of carriers that  
19               are currently relying on collocation and transport facilities as compared to those  
20               who rely upon the UNE-P to provide end user services, it is likely that if all other  
21               operational and economic impairment were removed, between 20 and 30 carriers  
22               could seek collocation and transport facilities in the busier wire centers

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*Bulk) Basis*, Case No. 02-C-1425, Public Transcript (pages 290-293), Testimony of Michael A. Nawrocki,  
On Behalf of Verizon New York, Inc.

1 throughout South Carolina in the absence of UNE-P. Hence, it remains to be seen  
2 whether Mr. Gray's promises will be met.

3

4 **Q. IS YOUR ORIGINAL RECOMMENDATION REASONABLE IN LIGHT**  
5 **OF THE POTENTIAL THAT COLLOCATION MAY GIVE RISE TO**  
6 **IMPAIRMENT AS SOME POINT?**

7 A. Absolutely. In fact, I recommended that the Commission take action *if*  
8 collocation gives rise to impairment and not before that point. Hence, Mr. Gray's  
9 concerns are unfounded.

10

11 **Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?**

12 A. Yes, it does.